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THE GEOGRAPHIC RACES OF CYANOCITTA CRISTATA.

BY HARRY C. OBERHOLSER.

As currently accepted the range of *Cyanocitta cristata florincola* is confined to Florida. Study of material in the United States National Museum, including the Biological Survey collection, recently acquired from the southeastern United States, has led, however, to the conclusion that the limits of the geographical distribution of this race must be very greatly extended. This extension includes South Carolina, the type locality of *Cyanocitta cristata cristata* (Linnaeus), and thus involves a readjustment of both forms of the species. These changes in distribution and nomenclature are explained in the following paragraphs:

Cyanocitta cristata cristata (Linnaeus).

Corvus cristatus LINNAEUS, Syst. Nat., ed. 10, I, 1758, p. 106 ("America septentrionali") (based on *Pica glandaria caerulea cristata* Catesby, Nat. Hist. Carolina, Fla., and Bahama Is., I, 1753, p. 15, pl. 15).

C[yanocitta]. c[ristata]. florincola COUES, Key North Amer. Birds, ed. 2, 1884, p. 421 ("Florida" [type from Hibernia, Clay Co., Florida]).

Cyanocitta cristata florincola AUCT.

Chars. Subsp.—Size small; blue of upper parts decidedly purplish; white tips of greater wing-coverts, tertials, secondaries, and rectrices, small.

Measurements.—Male:¹ wing, 119.5–135 (average, 126) mm.; tail, 114.5–126.5 (120); exposed culmen, 23–26 (24.5); tarsus, 32.5–35 (33.5); middle toe without claw, 18–23 (20).

Female:² wing, 117.5–127 (average, 122.5) mm.; tail, 108.5–117.5 (113.5); exposed culmen, 23–25.4 (24.5); tarsus, 32–34.5 (33.5); middle toe without claw, 17.5–19.5 (18.8).

Type locality.—Southeastern South Carolina.³

Geographic distribution.—Resident in the southeastern United States, north to central North Carolina, northwestern South Carolina, northern Alabama, southwestern Indiana, southern Illinois, southeastern Missouri, central Arkansas, northeastern and central Texas; west to southwestern Arkansas and central Texas; south to the coast of the Gulf of Mexico from southeastern Texas to the southern part of the Florida peninsula; east to the Atlantic coast from southern Florida to North Carolina.

¹ Eleven specimens, from Florida.

² Nine specimens, from Florida.

³ Here for the first time thus definitely designated.

Remarks.—The characteristics of this race are very constant in Florida birds, but become less so in those from farther north. There is apparently little, if any, migratory movement in this subspecies, so that its occurrence in any locality is fairly good evidence of its breeding there. Specimens from Christ Church Parish in southeastern South Carolina are in color like those from Florida, though barely darker and less purplish above, and with the white tips of the wing-feathers slightly larger. Birds from Kershaw County in the north central part of the same State are practically the same as those from Florida. Examples from southern Alabama, southern Mississippi, and southern Louisiana are similar to Florida birds, but are somewhat larger and have rather more extensive white markings on wings and tail. Breeding birds from Raleigh, North Carolina, and from extreme northern Alabama are intermediate between *Cyanocitta cristata cristata* and the form of the species inhabiting the northeastern part of the United States, but are nearer the former. A large series of Blue Jays from the lower Wabash valley in southwestern Indiana and southeastern Illinois shows conclusively that breeding birds of this region must be referred to *Cyanocitta cristata cristata*. They are, in general size, in width of the white wing-bars, and in the white tips of the wing-quills, very close to this race, although in the amount of white on the tips of the rectrices, as well as in the color of the upper parts they approach closely to the northern race. The following average measurements of specimens from southeastern Illinois and southwestern Indiana show how near the Florida race in size the birds from this region are:

Male:¹ wing, 130 mm.; tail, 127.5; exposed culmen, 25.2; tarsus, 34.5; middle toe without claw, 20.5.

Female:² wing, 125 mm.; tail, 119.5; exposed culmen, 23.5; tarsus, 34.5; middle toe without claw, 20.5.

In this connection it is of interest to note that Mr. Robert Ridgway, so he informs me, has recently come to the same conclusion regarding the subspecific identity of these southern Illinois and Indiana breeding birds.

The well-known Blue Jay was first given a technical designation by Linnaeus,³ who based his name entirely on the figure and description given by Catesby.⁴ Although Catesby gives no specific locality for the species, the well-known fact that Catesby's work was done largely in the vicinity of the Savannah River in southeastern South Carolina has led to the selection of "Carolina" as the type locality.⁵ An examination of Catesby's figure and description leaves no doubt at all that both refer to the small purplish blue race with narrow white wing and tail edgings, which is found in the southeastern United States and which was sub-

¹ Nine specimens.

² Five specimens.

³ *Corvus cristatus* Linnaeus, Syst. Nat., ed. 10, I, 1758, p. 106.

⁴ Nat. Hist. Carolina, Fla., and Bahama Is., I, 1753, p. 15, pl. 15.

⁵ American Ornithologists' Union Committee, Check-List North Amer. Birds, 1910, p. 222.

sequently named *Cyanocitta cristata florincola* by Dr. Elliott Coues.¹ This discovery necessitates, of course, the transference of the name *Cyanocitta cristata cristata* to the Florida bird and the relegation of *Cyanocitta cristata florincola* Coues to synonymy. Furthermore, it now seems worth while still more definitely to designate the type locality as southeastern South Carolina.

Since there are no other names to complicate the situation, the common Blue Jay of the northeastern United States needs a new designation.

The 215 specimens of this race examined in the present connection are from the following localities:

Alabama.—Barachias (March 8 and 9, 1913); Spring Hill (May 8 and 11, 1911); Mobile Bay (April 29, 1892); Perdido Bay (Sept. 13, 1911); Catherine (April 14, 1894); Autaugaville (Feb. 29, 1912; Sept. 17, 1911); Leighton (July 2, 1913; April 22, 23. and 24, 1914; March 30, 1912); Mobile (April 20, 1915); Guntersville (June 17, 1913); Choecocoloco Mountain (June 10, 1913); Hayneville (July 22, 23, 24, 26, and 28, 1915); Sand Mountain (June 25 and 27, 1913; April 16, 1914); Huntsville (May 13, 1912); Teasley's Mill (May 13, 1914); Mussel Shoals (March 18, 1915); Elkmont (July 15, 1913); Auburn (March 4 and 6, 1912); Wilsonville (June 3 and 4, 1913).

Arkansas.—Delight (July 17, 1912).

Florida.—Braden River (June 11, 1918); Lake Worth (May 6, 1889); Micco (Jan. 25, 1895); Fort Bassinger (Feb. 7, 10, 17, 22, and 26, 1896; March 3 and 4, 1896); Fort Thompson (Feb. 28, 1898; March 3, 1898); Driggs Landing, Kissimmee River (March 2, 1895); Kissimmee (Jan. 26 and 30, 1901; Feb. 2, 1901); Lake Kissimmee (March 21, 1901); Fort Gardner, Kissimmee River (Feb. 28, 1901; March 9, 1901); Moses Creek (May 17, 1894); five miles west of Miami (March 1, 1895); two miles west of Miami (Nov. 24, 25, and 26, 1904; Dec. 15, 1904); Mullet Lake (Nov. 23, 1895); Fort Meade (June 29, 1879); Tallahassee (Jan. 24, 1903; Feb. 18, 1903); Welaka (Dec. 26 and 28, 1885); Lake Arbuckle, Polk County (March 7, 1895); Lake Hatch-ne-haw (Feb. 12, 1901); San Mateo (1892); Hibernia (Feb. —, 1870); Miami River (March 18, 1859); Bayport (Feb. 26, 1877); Pellicier's Creek (May 20, 1894); Milton (March 25, 1881); Orange Hammock (March 2 and 3, 1895); Enterprise (March 10, 1869); Lake Trafford (Feb. 1, 1898); Shell Hammock (Feb. 14, 1901).

Georgia.—Floyd's Island, Okefinokee Swamp (Jan. 4, 1917); Red Hill (June 1, 1916); Liberty County (1845).

Illinois.—Olney, Richland County (April 16, 18, 21, 22, 23, 27, and 29, 1914; April 11 and 12, 1917; May 6 and 8, 1914; May 2 and 12, 1917; Jan. 13, 1917; Jan. 12, 14, 15, 18, 19, 22 and 28, 1918; Dec. 15 and 17, 1917; Dec. 19, 1916); Sugar Creek Prairie, Richland County (June 2, 4, 5, and 6, 1890); Mount Carmel (April 29, 1869; April 17, 1878; Oct. 22, —); Wabash County (Oct. 4, 1879).

¹ Key North Amer. Birds, ed. 2, 1884, p. 421 (Florida).

Indiana.—Knox County (April 21, 1881; May 5, 1881); Wheatland (May 5, 1885; May 10, 1890; May 5, 1883).

Louisiana.—Belcher (Feb. 3, 4, and 5, 1908); Bayou Tunica (March 16, 1884); Iowa Station (April 18, 1899).

Mississippi.—Magee (July 12, 1912); Adams Station (Oct. 22, 1912); Duckhill (May 24, 1912); Bay St. Louis (April 28 and 29, 1892); Washington (May 20, 23, and 24, 1892).

North Carolina.—Raleigh (Oct. 28, 1891).

South Carolina.—Blacksburg (June 22, 1916; Easley (June 13, 1916; Christ Church Parish (May 11 and 16, 1911; April 28, 1911); Wayne's Place, Christ Church Parish (May 3, 5, and 10, 1911); Aiken (March 15, 1873); Kershaw County (Feb. 4, 1904; March 17, 1904; Jan. 22, 1904; Dec. 28 and 29, 1903).

Texas.—Dickinson Bayou, opposite Galveston (March 20, 22, and 24, 1892).

***Cyanocitta cristata bromia*, nom. nov.**

Cyanocitta cristata cristata Auct. nec Linnaeus.

Chars. subsp.—Similar to *Cyanocitta cristata cristata*, but larger; upper surface decidedly more bluish (less purplish); white tips of greater coverts, tertials, secondaries, and rectrices, larger.

Description.—Type, adult male, Wooster, Wayne County, Ohio; October 18, 1892; Harry C. Oberholser, original number, 767. Crown and occipital crest blue, between flax flower blue and grayish blue violet (2),¹ the anterior part of crown with whitish flecks; nasal plumes light blue, with black tips and shafts; forehead, lores, and a rather narrow collar around the entire neck, black; behind this a cervical collar of blue like the crown, reaching around to the sides of the neck; back, scapulars, and sides of neck posterior to the blue collar, between dark plumbago blue and deep aniline lilac; rump and upper tail-coverts, light tyrian blue, verging toward squill blue, the longest upper tail-coverts duller and more greenish; tail blue, varying from brownish porcelain blue on the bases of the middle feathers and gobelin blue on the basal portions of the remaining rectrices, to dark orient blue distally, the inner margins of all but the middle pair basally dark mouse gray; middle tail-feathers regularly and numerously barred with black; the remaining rectrices also thus barred on their outer webs except basally, these bars gradually decreasing toward the outermost pair of rectrices, which are entirely without such markings; all but the middle pair of tail-feathers broadly tipped with white, these areas being 16 mm. long on the inner feathers to about 34 mm. on the outermost; wing-quills dark mouse gray, their inner margins somewhat lighter and more brownish, the tips of the primaries washed with

¹ The names of colors are from Mr. Ridgway's "Color Standards and Color Nomenclature."

deep orient blue, the outer edges of the primaries deep Alice blue, but their terminal portions only washed with this color; tertials and outer margins of the secondaries between indigo blue and Hortense blue; but the middle part of the outer webs of the tertials pale blue, and all but the outer webs of both tertials and secondaries broadly barred with black; primary coverts similar to the outer margins of the secondaries, but duller and darker, and also barred with black; greater coverts partly China blue, partly between indigo blue and Hortense blue, and barred with black; median and lesser coverts like the back; greater coverts broadly, the tertials and secondaries very widely, tipped with white; superciliary stripe, cheeks, auriculars, together with chin and throat anterior to the black collar, pale grayish white washed with purplish blue; breast and sides of breast, light drab, washed with pale purplish blue; sides and flanks. drab gray; the rest of the lower parts dull white; lining of wing fuscous black; axillars and edge of wing washed with dull blue; "iris dark brown; bill and feet black."

Measurements.—*Type*: total length (in flesh), 304 mm.; extent, 450; wing, 143; tail, 135; exposed culmen, 27; tarsus, 35.5; middle toe without claw, 21.5.

Male:¹ wing, 132.5–148 (average, 139.8) mm.; tail, 122–147.5 (133.5); exposed culmen, 23–30 (27); tarsus, 35.5–37 (36.3); middle toe without claw, 20.5–23.5 (21).

Female:² wing, 128.3–139 (average, 132) mm.; tail, 122.5–130 (127); exposed culmen, 23–26.5 (24.3); tarsus, 31.8–36 (33.8); middle toe without claw, 18.5–21 (19.5).

Type locality.—Wooster, Wayne County, Ohio.

Geographic distribution.—Northeastern United States and southern Canada. Breeds north to Newfoundland, the valley of the St. Lawrence River, northern Ontario, and northern Alberta; west to central Alberta, western North Dakota, western South Dakota, eastern Colorado, and northwestern Texas; south to central northern Texas, central Missouri, central Illinois, central Indiana, central eastern Tennessee, northwestern North Carolina, and Virginia; east to the Atlantic coast from Virginia to Newfoundland. Casual at Fort Churchill, Manitoba, and Fruitland, New Mexico. More or less migratory in the northern part of its range, and occurring in winter in southern Illinois.

Remarks.—As already explained, the common eastern Blue Jay proves to be nameless by reason of the transfer of its current subspecific name to the southern race of the species. Specimens from Maryland, the District of Columbia, and northern Virginia are in color like the northern form, and only in their slightly smaller size do they indicate vergence toward *Cyanocitta cristata cristata*, and they, therefore, are clearly refer-

¹ Ten specimens, from Ontario, Saskatchewan, Manitoba, North Dakota, Minnesota, New York, Pennsylvania, and Illinois.

² Seven specimens, from Minnesota, Massachusetts, New York, and Pennsylvania.

able to *Cyanocitta cristata bromia*. Examples from central northern and northwestern Texas, as well as from central Oklahoma, are, however, decidedly intermediate, but belong apparently to this northern subspecies. Although the breeding birds and a majority of the winter birds of a large series from Olney, Illinois, are *Cyanocitta cristata cristata*, there are six individuals which are so typical of *Cyanocitta cristata bromia* that they apparently indicate a southwestern movement of the latter during the winter season.

The 106 specimens of *Cyanocitta cristata bromia* examined came from the localities given below:

Manitoba.—Red River.

Nova Scotia.—Halifax.

Ontario.—Lorne Park, Peel County (March 5, 1888); Lake of Bays (July 19, 1911).

Saskatchewan.—St. Louis (Sept. 12, 1897).

District of Columbia.—Washington (May 5, 1893; Nov. 26, 1910; Oct. 5, 1891; Sept. 19, 1911); Anacostia River (April 30, 1893); Rock Creek (May 7, —; May 5, 1875).

Illinois.—Cook County (Dec. 6, 1869); Olney¹ (Dec. 20, 1916; Jan. 14, 1918; Dec. 15 and 17, 1917; Oct. 14, 1913; Jan. 18, 1917).

Kansas.—Cairo (Aug. 4, 1892); Fort Leavenworth (June 3, 1859); Belle Plaine (July 26, 1892).

Maryland.—Laurel (Sept. 19, 26, and 27, 1889); May 30, 1882; May 6 and 13, 1889; May 12, 1888); Grantsville (June 26, 1899); Sandy Springs (Feb. 1, 1891); Tacoma Park (Oct. 18, 1889); Great Falls (Sept. 27, 1889); Garrett Park (June 25, 1893); Aikin (Dec. 14, 1893); Bittering (June 28, 1899); Branchville (Jan. 19, 1893); Finzel (June 17, 1899); eastern bank of Susquehanna River (March 2, 1894).

Massachusetts.—West Newton (March 9, 1894); Lincoln (April 10, 1896); Amherst (May 12, 1886); Cambridge.

Minnesota.—Fort Snelling (Jan. 2, 1903; March 7, 1903; March 26, 1890; Nov. 11, 1890; Dec. 13, 1890).

New Mexico.—Fruitland (Oct. 17, 1908).

New York.—Syracuse (May 7, 1887); Highland Falls (Oct. 2 and 4, 1882; Sept. 29, 1896; May 17, 1883; Nov. 30, 1878); Catskill Mountains (Sept. 21, 1896).

North Carolina.—Roan Mountain (July 11, 1895).

North Dakota.—Fairmount (May 24, 1915); Oakdale (June 30, 1913; July 1, 1913); Tokio (July 2, 1915); Pembina (June 2, 1873).

Ohio.—Wooster (Oct. 7 and 18, 1892; Oct. 3 and 21, 1890; Nov. 26, 1891; Dec. 25, 1890; Jan. 22, 1891; March 25, 1892).

Oklahoma.—Mount Scott (April 28, 1904).

Pennsylvania.—Carlisle (April 30, 1844; May 2, 1844); Red Bank (June 16, 1894); Leasuresville (June 29, 1897).

¹ Not breeding.

Rhode Island.—Lake Worden (Nov. 25, 1900; Dec. 11, 13, and 20, 1900).

Texas.—Lipscomb (June 22 and 24, 1903); Vernon (April 28, 1894); Henrietta (April 21, 1894).

Virginia.—Fairfax County (Nov. 25, 1880); Falls Church, Fairfax County (Nov. 27, 1890); McRaes (Oct. 24, 1890); Gainesville (May 17, 1887).

West Virginia.—Franklin (June 26, 1899); White Sulphur Springs (April 29, 1893).

Wisconsin.—Palmyra (June 23, 1890); Marquette (Oct. 25, 1908); Kenosha (Oct. 11, 1888); Delavan (Oct. 23, 1910).

THIRTY-EIGHTH STATED MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION.¹

BY T. S. PALMER.

THE Thirty-eighth Stated Meeting of the American Ornithologists' Union¹ was held in Washington, D. C., November 8 to 11, 1920. The business sessions on the opening day were held at the Cosmos Club and the public sessions on the following days at the United States National Museum. The meeting was one of the most largely attended in recent years, and with the excursions on Friday and Saturday occupied the entire week.

Attendance.—The total attendance of Fellows, Members, Associates and visitors was nearly 150. The Fellows present numbered 25 and the Retired Fellows two. Among these were two of the nine surviving founders, Dr. A. K. Fisher and Dr. R. W. Shufeldt, and eleven members elected at the first meeting in

¹This was the eleventh meeting held in Washington, D. C. Readers who have access to early volumes of 'The Auk' will be interested in comparing the report of the first Washington meeting in 1886, given in Vol. IV, pp. 56-61. The Union then had 252 members, of whom about 20 Active Members (now known as Fellows) and 13 Associates were present. Five additional Corresponding Members and 44 Associates were elected. Committees were appointed to draft a new Constitution and By-laws, and to take the necessary steps to incorporate the Union. The recent publication of the first 'Code and Check-List' had caused a deficit which it was necessary to meet. The economic relations of birds caused considerable discussion in connection with the presentation of extended reports of the Committees on Protection and on Geographical Distribution of North American Birds. The work originally undertaken by these Committees subsequently developed to such an extent that it resulted in the organization of the National Association of Audubon Societies and the U. S. Biological Survey.